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# United States Patent [19]

Kaye et al.

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[54]	METHOD AND APPARATUS FOR CORRECTING HORIZONTAL, VERTICAL AND FRAMING ERRORS IN MOTION PICTURE FILM TRANSFER	4,054,918 4,104,680 4,296,438 4,319,280 4,498,745	10/1977 8/1978 10/1981 9/1982 2/1985	Kamogawa et al. .... Holland .... Sternme et al. .... Roos et al. .... DeJeney .	358/216 358/214
[75]	Inventors: Michael C. Kaye, Agoura Hills; Majid Bermanian, Glendale, both of Calif.	4,823,204 5,430,478	4/1989 7/1995	Holland .... Kaye et al. ....	358/214 348/99

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#### Related U.S. Application Data

[63] Continuation of Ser. No. 142,854, Dec. 15, 1987, abandoned.  
[51] Int. Cl.<sup>6</sup> ..... H04N 5/86  
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[58] Field of Search ..... 358/214-216,  
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[57] ABSTRACT

A film correction system adjusts a relative position of film containing an area for information and a scanner of the film area. The system includes a scanner for scanning the film area at a film plane. A film drive moves the film along the film plane. A focused beam separate from the film area scanner scans a film edge in the film for determining a location of the film edge. A circuit is coupled to the focused beam scanner for changing a relative position of the film area scanner and the film area. The film edge scanner is a flying spot scanner, and the apparatus includes signal processors for processing the sprocket information. The system may be retrofit to an existing telecine apparatus. A separate coil may be used to provide deflection of a flying spot scanner used to scan the picture information on the film.

67 Claims, 19 Drawing Sheets

